

admission, and 31% (53 of 171) were community identified. Overall, 9% (5 of 171) resided in long-term care facilities. Of all patients in acute-care facilities, 30% (35 of 118) had infections and 70% were colonized. Overall, 38% (65 of 171) had an acute-care admission in the 1 year prior to CPO identification; 59% (63 of 106) of those who did not have a previous admission had received healthcare outside Alberta. A large proportion of on-admission cases (81%, 46 of 57) and community-identified (66%, 33 of 53) cases did not have any acute-care admissions in Alberta in the previous year. Overall, 10% (14 of 171) had ICU admissions in Alberta within 30 days of CPO identification, and 5% (8 of 171) died within 30 days. The most common carbapenemase gene identified was NDM-1 (53%, 90 of 171). **Conclusions:** These findings highlight the robust nature of Alberta's provincial CPO surveillance network. We reviewed 3 different databases (laboratory, health ministry, IPC) to obtain comprehensive data to better understand the epidemiology of CPO in both the community and hospital settings. More than half of the individuals with CPO were initially identified in the community or on admission. Most had received healthcare outside Alberta, and no acute-care admissions occurred in Alberta in the previous year. It is important to be aware of the growing reservoir of CPO outside the hospital setting because it could impact future screening and management practices.

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Poster Presentation

A Statewide Assessment of Antifungal Stewardship Activities in Acute-Care Hospitals in Connecticut

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Background: Morbidity and mortality associated with invasive fungal infections and concerns of emerging antifungal resistance have highlighted the importance of optimizing antifungal therapy among hospitalized patients. Little is known about antifungal stewardship (AFS) practices among acute-care hospitals. We sought to assess AFS activities within Connecticut and to identify opportunities for improvement. **Methods:** An electronic survey assessing AFS practices was distributed to infectious disease physicians or pharmacy antibiotic stewardship program leaders in Connecticut hospitals. Survey questions evaluated AFS activities based on antibiotic stewardship principles, including several CDC Core Elements. Questions assessed antifungal restriction, prospective audit and feedback practices, antifungal utilization measurements, and the perceived utility of a local or statewide antifungal antibiogram. **Results:** Responses were received from 15 respondents, which represented 20 of 31 hospitals (65%); these hospitals made up the majority of the acute-care hospitals in Connecticut. Furthermore, 18 of these hospitals (58%) include antifungals in their stewardship programs. Also, 16 hospitals (52%) conduct routine review of antifungal ordering and provide feedback to providers for some antifungals, most commonly for amphotericin B, voriconazole, micafungin, isavuconazole, and

flucytosine. All hospitals include guidance on intravenous (IV) to oral (PO) conversions, when appropriate. Only 14 of hospitals (45%) require practitioners to document indication(s) for systemic antifungal use. Most hospitals (17, 55%) provide recommendations for de-escalation of therapy in candidemia, though only 4 (13%) have institutional guidelines for candidemia treatment, and only 11 hospital mandates an infectious diseases consultation for candidemia. Assessing outcomes pertaining to antifungal utilization is uncommon; only 8 hospitals (26%) monitor days of therapy and 5 (16%) monitor antifungal expenditures. Antifungal susceptibility testing on *Candida* bloodstream isolates is performed routinely at 6 of the hospitals (19%). Most respondents (19, 95%) support developing an antibiogram for *Candida* bloodstream isolates at the statewide level. **Conclusions:** Although AFS interventions occur in Connecticut hospitals, there are opportunities for enhancement, such as providing institutional guidelines for candidemia treatment and mandating infectious diseases consultation for candidemia. The Connecticut Department of Public Health implemented statewide *Candida* bloodstream isolate surveillance in 2019, which includes antifungal susceptibility testing. The creation of a statewide antibiogram for *Candida* bloodstream infections is underway to support empiric antifungal therapy.

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A Statistically Significant Reduction in Hospital Onset *Clostridioides difficile* Events Using a Learning Collaborative Model

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Background: Evidence-based best practices are available for the reduction and prevention of *Clostridioides difficile* infection (CDI). Often, these practices are not consistently followed in many inpatient care settings. A learning collaborative model resulted in a cost neutral, rapid, sustainable, statistically significant reduction in CDI events across an 88-hospital campus system without requiring hospitals to standardize laboratory methods, increase spending or increase staffing. **Methods:** In March 2018, a healthcare system with 88 critical access and community hospital campuses across 29 states participated in a harms-reduction learning collaborative. The collaborative format included educational webinars, gap analyses, action plans, and coaching calls facilitated by subject matter experts (SMEs). A collaborative cohort of 11 hospitals (55% rural*) was identified as having significant opportunity for improvement. These facilities participated in 3 monthly coaching calls. The coaching calls supported peer-to-peer sharing of practices and discussions of challenges and successes, and educational materials and presentations were provided by SMEs in pharmacy and infection prevention. **Results:** Statistically significant changes for the 88-hospital system as a whole: (1) 2018 compared to 2017: $P < .001$ (statistically significant); (2) 1H2018 compared to 2H2018 (before-and-after collaborative): $P = .001$; (3) 2019 compared to 2018: $P < .001$ (statistically significant). Statistically significant changes for the collaborative cohort: (1) 2018 compared to 2017: $P < .001$; (2) 1H2018 compared to 2H2018 (before-and-after collaborative): $P = .002$; and (3) 2019 compared to 2018: $P < .001$. We used 2-proportion, 2-tailed z-test for our analysis. **Conclusions:** Utilizing a learning collaborative model that

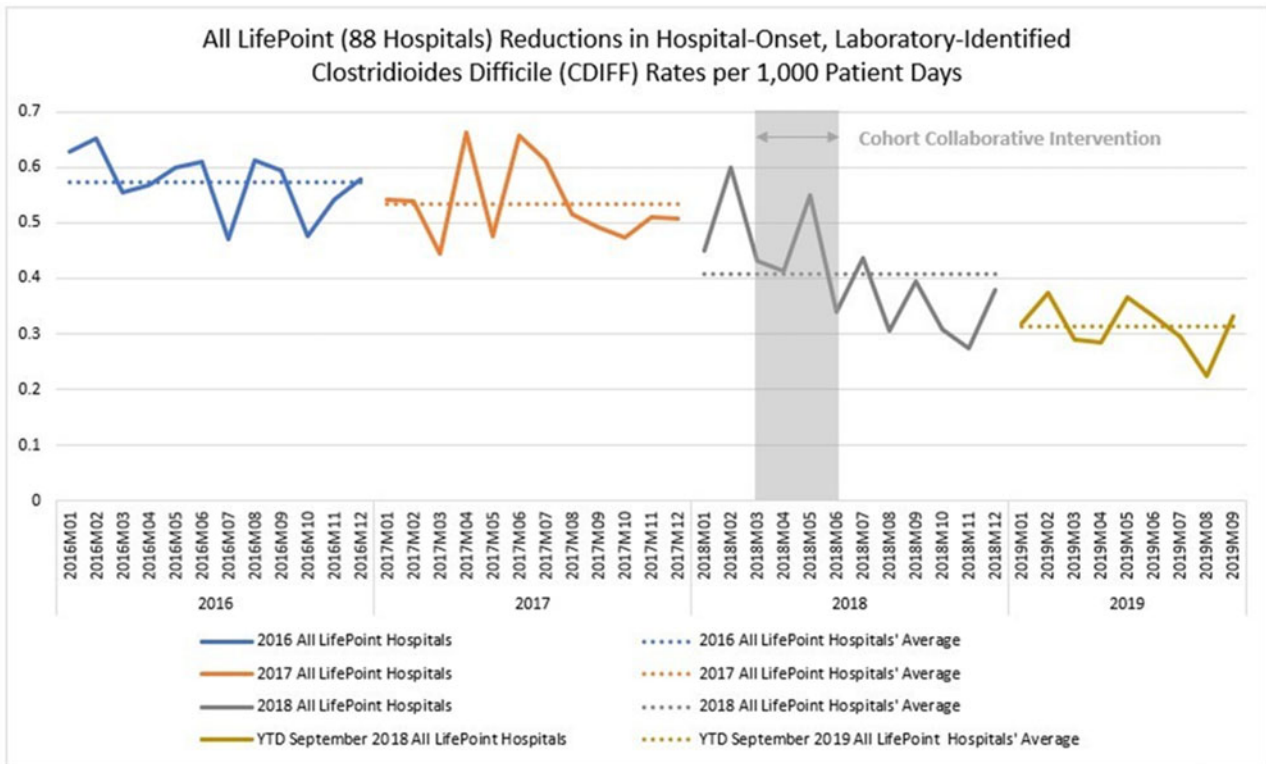


Fig. 1.

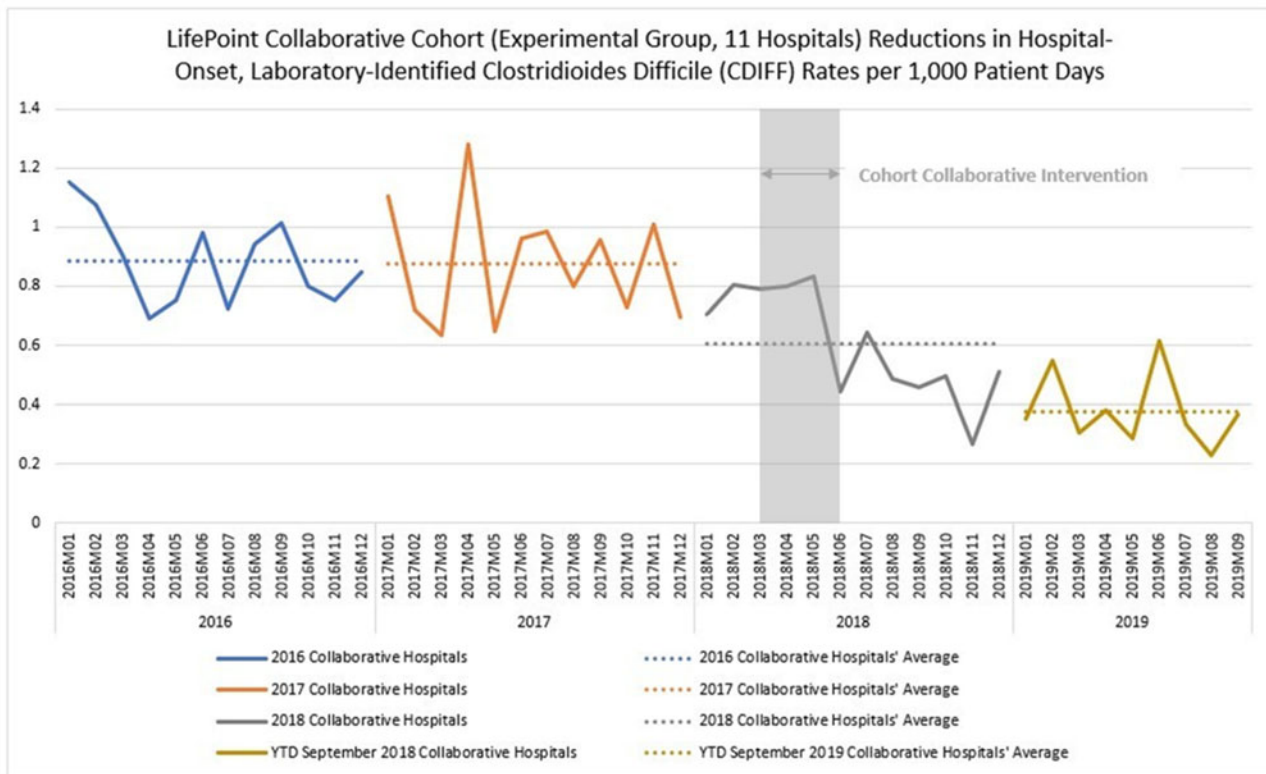


Fig. 2.

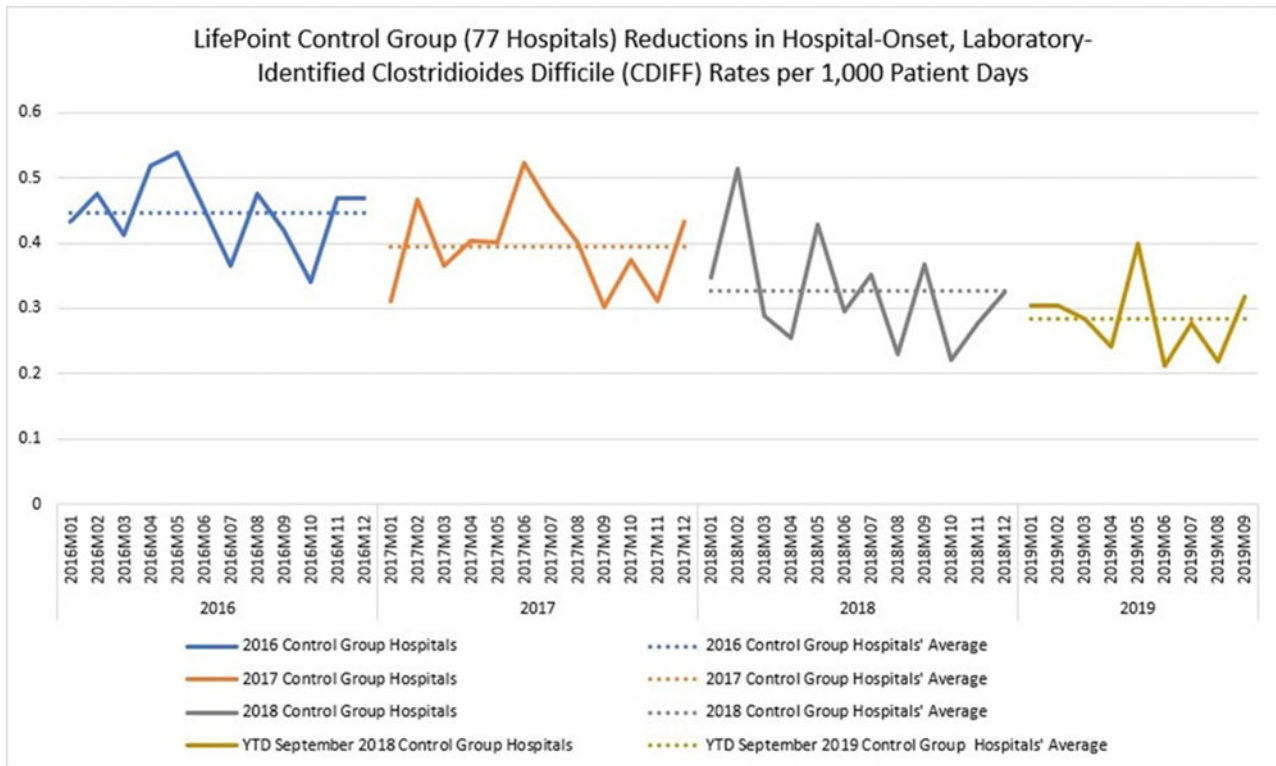


Fig. 3.

included webinars, gap analyses, and interactive coaching calls, a cohort of 11 hospitals was able to induce rapid improvements to adherence of evidence-based practices resulting in a rapid, sustained, statistically significant improvement for both the cohort hospitals and the healthcare system.

*2018 American community survey, US Census.

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A Successful Bundled Intervention to Reduce Hospital-Acquired Pneumonia: Sustainability Still an Issue

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Background: Hospital-acquired pneumonia (HAP) is one of the most common healthcare-associated infections (HAIs). Interventions based on the identification of patients at risk for aspiration with subsequent application of multidisciplinary measures, such as speech therapy follow-up, head elevation, oral hygiene, and patient and family education can be effective in reducing the incidence of HAP. In 2016, the step-down unit of our institution experienced an increase in the incidence of HAP with 21 cases. A root-cause analysis showed that most of them were related to comorbidities that increased aspiration risk. We conducted an study

to decrease the incidence of HAP through a multidisciplinary bundled intervention. **Methods:** We conducted a quasi-experimental study in a 45-bed step-down unit from January 2016 to June 2019. In January 2017, we conducted an educational intervention with all the unit team, reinforcing practices of bed head elevation and oral hygiene. In June 2018, we observed inconsistencies in practice and conducted a second intervention with another round of educational training and a bundled intervention consisting of the following elements: identification of patients at risk for aspiration at admission by a speech therapy evaluation, bed-head elevation, oral hygiene, feeding guidance individualized to each patient by a nutritionist and a speech therapist, patient and family education with a printed material, signaling of aspiration risk in a care plan board within the room and development of a sialorrhea treatment protocol. HAP surveillance was conducted in accordance to CDC definitions and was reported as number of HAP cases per 1,000 patient days. **Results:** Our first intervention decreased the incidence of HAP in the first semester of 2017 from 1.03 to 0.29 (graph) but was not sustained. The incidence started to increase in the second semester of 2017 and reached a high incidence of 1.87 HAP per 1,000 patient days in the first semester of 2018. The second bundled intervention succeeded in decreasing HAP incidence to 0.57 in the second semester of 2018 and 0.23 in the first semester of 2019. **Conclusions:** An educational intervention combined with a bundled intervention focused on strategies to reduce the risk of aspiration succeeded in decreasing the incidence of HAP in a step-down unit. However, the sustainability of improvements remains challenging.

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